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October 6, 2005

Malcolm T. Kerley, P.E.
Chief Engineer
Virginia Department of Transportation
1221 East Broad Street
Richmond, Virginia 23219

Dear Mal:

As discussed with you on Tuesday, October 4, we did not submit a letter of interest on the Route 460 Coalfield Connector project. However, not submitting our interest was because of unusual circumstances that prevented us from having the information to you at the appointed time.

Our team of Palmer Engineering, QORE, Bizzock, Inc., and Wilbur Smith Associates is interested in this project. Consequently, as discussed with you I am now submitting the Statement of Interest on this project.

Thank you for agreeing to accept this document later then you expected. It is our hope that there is sufficient interest for you to move this project to the next stage.

We look forward to working with you on this and other projects.

Respectfully submitted,

WILBUR SMITH ASSOCIATES

Jimmy Mills
Vice President

JM

Enclosure

STATEMENT OF INTEREST
U.S. Route 460 Coalfields Connector
State Project Number: 0460-013-120
UPC 64144
Virginia Department of Transportation

I. Brief Statement of Interest

Wilbur Smith Associates (WSA) has partnered with Palmer Engineering and Qore Property Sciences to pursue the services described in this Request for Information. Bizzack, Inc. (a member of The Mountain Companies which includes Mountain Enterprises) will act as the contractor for the Team and will work closely with the Design Team to develop innovative, cost-effective solutions for this connector route. In keeping with the spirit developed by the VDOT in-house design staff for this project, we will henceforth refer to our Team as the **Road to the Future Team**.

Palmer Engineering and QORE have participated in field visits with VDOT and FHWA personnel on US 460 and US 119 projects. Bizzack was prime contractor on several of the US 119 projects. The purpose of VDOT's visits was to explain how the teaming efforts from planning through construction have resulted in cost effective highway projects in the Appalachian Coalfields of Kentucky. It is because of the interest VDOT and FHWA has expressed in KYTC's road building practices that the **Road to the Future Team** wishes to offer our services.

II. Topics or Issues not Addressed in RFI

The Road to the Future Team Has Applicable Value Engineering Experience for VDOT.
Through their work as the design consultant for Kentucky's 18 miles of US 460, Palmer Engineering has participated in several coordination meetings with VDOT concerning the connection between Kentucky's sections of US 460 (Corridor Q) and the Coalfields Connector. At many of those meetings, discussions were held regarding ways to reduce earthwork on the Virginia Section while maintaining adequate design parameters.

Virginia's in-house design staff has encountered many difficulties in the development of a construction section that connects the US 460 section from the Kentucky State Line with both the Breaks Interstate Park and the new Coalfields Expressway location. The biggest challenge has been the amount and cost of excavation material generated in this section and the lack of locations for disposal.

Palmer Engineering has been involved in making suggestions that have helped Virginia's in-house staff reduce excess excavation quantities by both changing the mainline grade and utilizing an initial-ultimate approach to construction. Initial construction cost estimates developed by VDOT for the first phase of the project connection to the park were considerably higher than the funding available to Virginia for this project. Both changing the grade and utilizing a 2-lane initial/4-lane ultimate concept significantly reduced the cost for this first phase to close to the point of being affordable. Because of the potential to increase construction costs, another area that is routinely addressed during planning and design for similar types of projects in Kentucky is the influence that coal mines and related facilities have on road and bridge construction. In both the US 460 and US 119 projects in Kentucky, QORE personnel worked closely with Palmer and Bizzack to develop practical, cost-effective solutions to accommodate both active and abandoned coal mines located in roadway cuts, at grade, below grade and bridge locations.

The **Road to the Future Team** suggests that the first step taken following selection would be to convene a Value Engineering study group to examine possible modifications in the alignments

and grades to better fit the project to the existing terrain and reduce the overall construction cost, as well as review impacts of past, present and future mining. The Team has a strong base in roadway, environmental, geotechnical, minerals, and construction to effectively develop comprehensive, interdisciplinary suggestions for project improvements. Jimmy Mills of WSA has unparalleled experience in leading Value Engineering Teams for VDOT.

The Road to the Future Team Has Applicable Experience for Re-Evaluation of the FONSI.
The FONSI developed by VDOT for the Coalfields Connector is based on a 700-foot corridor. Once the Value Engineering study has been completed, the Team will determine what locations, if any, fall outside of the approved corridor and will require re-evaluation. Palmer Engineering authored the US 460 FONSI that covers 18 miles in Kentucky as well as the portion of the connector ending at VA 631. WSA's environmental staff in Virginia will work closely with Palmer Engineering's Doug Lambert, who authored the US 460 document for the Kentucky Transportation Cabinet, to determine what areas need re-evaluation.

The Road to the Future Team Has Applicable Experience for the Stream Permitting Issues.
The Coalfields Connector as currently designed has 2600 feet of stream impacts that require mitigation. The **Road to the Future Team** will first look to avoid impacts to streams in the Value Engineering stage. For those impacts that are unavoidable, mitigation on-site is always the most preferable first option. Initial designs for this section included the concept of performing on-site mitigation by purchasing and relocating the Willowbrook Country Club. Changes to the mainline grade have helped to reduce excess material so that purchase of the golf course is no longer necessary.

The other option mentioned at coordination meetings is the possibility of using a VDOT Mitigation Bank in Pound. Both Palmer Engineering and WSA have extensive experience in stream mitigation as it relates to highways. QORE's stream permitting experience is acquiring these permits for coal companies as a part of the mine permitting process. Bizzack will be able to provide innovative suggestions for avoidance and minimization from their construction experiences. Bizzack is currently constructing several highway projects with large quantities of excess material. Bizzack has been able to work with environment consultants to develop both onsite and offsite mitigation for stream impacts. The **Road to the Future Team** has a vast amount of practical expertise to address the stream permitting issues.

The Road to the Future Team Has Applicable Experience to Evaluate Excess Material Sites.
Following the reduction of excess material that Virginia's in-house designers achieved through design coordination with Kentucky, there was still an issue regarding where to dispose of the 2.5 million cubic yards of excess material generated by the first phase of the connector. An effort was made to find one site large enough to handle all of the excess material for that section. The **Road to the Future Team** will evaluate the location of excess material sites based on cost, environmental permitting, and property owner concerns. Bizzack has extensive experience in excess material site location since most highway projects have required the contractor to furnish offsite fill areas. The most cost-effective sites are generally adjacent to the excavation areas. Adjacent property owners should be contacted as soon as possible to negotiate fill placement. Most property owners are interested in fill placement that creates valuable flat land adjacent to a new highway. Bizzack will evaluate the cost of meeting the property owner demands and allow the team to choose and design the most cost effective site(s). Once the sites have been chosen, agreements with the property owners should be formalized in writing. This approach will eliminate lengthy and costly property acquisition.

Excess fill sites will generally require fill placement in streams. Identification of these stream impacts along with all other project stream filling will enable the Team to minimize stream impacts, lower the cost of permit application, and prevent delays to the project. Some sites may be more economical than others depending on stream mitigation requirements.

The Road to the Future Team Has Applicable Experience in Bridge Constructability.

The US 460 Coalfields Connector has three twin bridges on mainline and one single bridge on the connector to the Breaks Interstate Park. Of particular concern is the first bridge crossing: Grassy Creek at the Kentucky state line. This bridge starts just across the line in Kentucky with an abutment placed on a side-hill fill. Normally, wherever possible, Kentucky prefers to extend their bridges to begin in solid rock to avoid differential settlement problems in the abutment fills. That has been done successfully on the bridges designed by Palmer Engineering along US 119 and US 460 in Pike County. In this location, the back station end of the bridge does not reach a solid rock cut and must be placed in a fill. Issues have arisen concerning the constructability of the current bridge design with an 80-foot vertical retaining wall resting on a slope much steeper than 2:1.

The **Road to the Future Team** has unmatched experience in the design and construction of tall bridges in mountainous terrain. Palmer Engineering has designed nine major twin bridge structures either built or currently under construction in Pike County, Kentucky. These bridges are as tall as 230 feet with spans of up to 300 feet and include concrete I-beams, weathering steel beams, and the first steel tub girders constructed in Kentucky. Bizzack and their bridge contractor, Bush and Burchett, have constructed many of these bridges and have worked closely with Palmer's engineers on constructability issues. As part of the Value Engineering Study, these same engineers, as well as geotechnical representatives from Qore and WSA's bridge engineers, will evaluate the constructability of each bridge to determine the optimum abutment locations and pier configurations.

III. Little Additional Information is Needed for the Road to the Future Team to Begin

As a result of the work performed previously by Palmer Engineering to coordinate with Virginia, there is very little additional information needed for our Team. The **Road to the Future Team** will work diligently to build on the survey work previously performed by VDOT. First, the Team will utilize the property research performed by VDOT as the basis for beginning mineral rights research that will determine which mineral owners to potentially partner with. The Team already has all of the files for the US 460 FONSI in Kentucky that ends at VA 631 and a copy of the VDOT Coalfields Connector FONSI.

Background information regarding the design parameters and the basis for cost estimating done for the current Coalfields Connector design will be needed prior to commencing the Value Engineering Study. For the purposes of the Value Engineering Study, digital elevation models commonly available on the internet will be utilized to supplement the existing aerial coverage. If additional aerial mapping coverage is needed following the study, the Team will procure a flight with a local photogrammetry firm to expand the coverage.

IV. Structure of Public-Private Partnership or Other Procurement Methods

The **Road to the Future Team** will provide all necessary services that will support any number of Public Private Partnership opportunities available to VDOT through federal and state legislation. WSA is internationally and nationally recognized as a leading transportation financing analysis firm. As opportunities arise for bonding, toll financing, or leveraging innovative financing, WSA will be able to provide the needed services in a seamless and efficient manner. One possible procurement option would be to publicly auction the lease of the roadway and the developable land as a design, build, and operate package for both the roadway and the

developable sites and require the project owner to manage both the construction and operations of the road and the developable sites..

V. Other Ideas

The Road to the Future Team Can Assist VDOT in Leveraging Funding.

At the last coordination meeting, VDOT reported having roughly $56 million in funding for the connector project. Cost estimates approached $200 million for the entire connector and $67 million for the first phase leading to the Breaks Interstate Park. The first priority for VDOT is to get this first phase completed. As part of the Value Engineering Study, the **Road to the Future Team** will place an emphasis on making this first priority section fit within the funding available.

Prior to the passage of SAFETEA-LU, VDOT anticipated that an additional $10.2 million will be provided to the state in the form of ARC funding annually. This additional funding will provide some money for the second, more expensive phase, but will not be enough to cover the entire cost. Another avenue being explored is the use of National Highway System (NHS) funding. This would require the addition of US 460 to the National Highway System in both states. Paperwork has been initiated by both states to make that a reality in the anticipation of acquiring NHS funding.

Private Partnership financing can provide needed funding for the project. One opportunity would be through a "Private Operation" for the new road. Another opportunity would involve the public auction of the developable land created by the project to strategic companies and re-investment of the proceeds in the construction of the transportation facility or to reduce the cost of public sector or private sector bonding for the construction. Another potential opportunity would be to sell or lease the development rights to the created land for economic development and use the proceeds to reduce the investment risk by the private partnership with guaranteed funding to supplement toll revenues.

The Road to the Future Team Understands Economic Development Opportunities.

Kentucky has successfully partnered with local development organizations to designate excess material sites for specific types of development. Under Kentucky law, if an excess material site leaves a potentially developable area of greater than four acres, making an attempt to partner with local economic development is required. For example, on US 460, Palmer Engineering has developed five excess material sites with two intended for residential development, two for industrial development through the Pike County Industrial Development Authority, and one smaller site near the Breaks Interstate Park designated for future Tourism Cabinet use.

For the Coalfields Connector project, the **Road to the Future Team** will use a similar strategy to identify potential development opportunities. Once the excess material site locations have been determined and a general plan is developed for each, the Team will approach local and regional development organizations to gauge their interest. If they are interested, the Team will purchase the sites in Fee Simple and then, once construction is complete, sell the site to the development entity at a fair market value. To assure site stability and therefore improved marketability, the **Road to the Future Team** will take the lessons learned from working closely with Kentucky Economic Development Authority in geotechnical analysis of mined lands for industrial development sites throughout eastern Kentucky and apply it to the VDOT sites. In addition, WSA's Melissa Ziegler is an economic development specialist who will assist in a market analysis to develop a full range of scenarios to attract appropriate industries suitable for the sites being developed.

The Road to the Future Team Is Experienced in Partnering with Coal Companies

The Request for Information hits the nail on the head when it discusses the need to partner with coal companies to be successful on this project. VDOT has learned through visits with the Kentucky Transportation Cabinet that Kentucky has been very successful in holding down excavation costs by purchasing the mineral rights in advance and then allowing the contractor to sell the coal at market value during construction. Mineral rights are purchased to 150 feet below grade to ensure that future mining activities do not compromise the integrity of the bedrock underlying the road.

In Virginia, the contractor has to stop construction once he reaches a coal seam so that the mineral owner can enter the project to remove their minerals. This creates costly delays that drive up the price of the projects. This is the single biggest factor in higher construction cost estimates for the Coalfields Expressway as compared to similar projects in eastern Kentucky.

Unit costs for excavation in Kentucky on US 460 and US 119 have been averaging between $1.70 and $3.00 per cubic yard depending on how much coal is available for the contractor in that construction section.

The **Road to the Future Team** has extensive experience in dealing with mineral owners and coal companies in similar situations. QORE has long standing relationships with companies such as Virginia-based James River Coal, Massey Energy, and others. QORE provides exploration services, reserve analysis, stream permits, and mine engineering for coal companies. Bizzack has mined coal and is currently selling coal encountered on highway projects in Kentucky. Bizzack knows the local coal market and will aid the team in determining the value of the coal. The Team's thorough understanding of both the civil engineering and mining engineering make this team uniquely qualified the US 460 project. By partnering with the coal companies that own the mineral rights up front, the Team can help VDOT reduce costs so that the contractor does not have the inefficiency of mobilizing and demobilizing multiple times and the mineral owner does not have to make multiple trips on and off the site to remove what may be relatively small amounts of coal in each separate trip. This is but one solution to integrating coal mining and highway construction, and there are others.

The Road to the Future Team Can Effectively Pursue Coordination with Kentucky

Kentucky Transportation Cabinet officials have floated the idea with Virginia that the first phase of the Coalfields Connector could be constructed in conjunction with the last section of the US 460 project in Kentucky. This would allow the plans to be developed to Kentucky standards using Kentucky procedures. By doing this, Kentucky can eliminate approximately $10 million worth of construction for a tie-in to VA 80 just past the state line. Both states agree that this tie-in is not desirable and would like to see the connection provided closer to the Breaks Interstate Park entrance.

Virginia FHWA, Kentucky FHWA, and ARC officials have been approached with this concept and agree that it would be desirable and allowable for the project. With bid prices in Kentucky running significantly lower than in Virginia for excavation and bridge construction, this approach appears to have significant potential advantages. The concept discussed to date would be to have Kentucky pay for construction from their ARC funds and have Virginia reimburse Kentucky from Virginia's ARC funds.

Clearly, the **Road to the Future Team** has significant advantages in coordinating the construction segments with Kentucky.